

REMARKS

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

Disposition of Claims

Claims 1-2 and 4-13 are pending in this application. Of these claims, claims 10-13 are withdrawn from consideration. Claims 1 and 10 are independent. The remaining claims depend, directly or indirectly, from claim 1 or 10.

Rejection(s) Under 35 U.S.C § 103

Claims 1, 2, and 4-9 stand rejected as being unpatentable over U.S. Patent No. 3,873,840 (hereinafter "Ellis") in view of U.S. Patent No. 4,763,343 (hereinafter "Yanaki") or U.S. Patent No. 5,327,029 (hereinafter "Ericson"). For the reasons set forth below, this rejection is respectfully traversed.

One or more embodiments of the invention are directed to a method for measuring high-energy radiation accurately (*see* Publication of the Specification, paragraph [0053]). With reference to Figures 4 and 5, for example, an ion transport voltage is turned on in step 52, then, an ion current is measured in step 53, and, then, a leakage current is measured in step 55. Then, "[t]he difference between the measurements taken in step 53 and 55 is then used to derive the ion currents that result from high-energy radiation flux" (*see* Publication of the Specification, paragraph [0035]).

Accordingly, amended independent claim 1 requires, in part, applying a voltage pulse for a predetermined time between electrodes in an ion chamber, wherein the ion chamber is filled

with a gas capable of forming charged ions by high-energy radiation, then, measuring an ion current signal related to ion currents induced by the voltage pulse while the voltage pulse is being applied to the electrodes, then, measuring a leakage current signal after the voltage pulse has been turned off and after ion transport has stopped, and, then, determining a magnitude of the high-energy radiation flux dependent on the ion current signal and the leakage current signal.

In contrast, Ellis, Yanaki, and Ericson fail to show or suggest at least “measuring a leakage current signal after the voltage pulse has been turned off, after ion transport has stopped, and after measuring the ion current signal,” as required by independent claim 1.

In fact, Ellis teaches nothing more than that a gamma signal is subtracted from a signal including the gamma signal and neutron signal (*see* Ellis, column 5, lines 6-9). Further, even assuming *arguendo* that Ellis teaches that it is old and well-known to subtract one signal from another in order to arrive at the desired signal and that it is considered that Ellis inherently measures and removes the leakage current as alleged by the Examiner, Ellis does not show or suggest at least a specific way or timing of measuring a leakage current signal as acknowledged by the Examiner (*see* Office Action dated April 15, 2008, at pages 3 and 4).

The MPEP § 2112 makes it clear that “[t]he fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. . . . In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.”

Therefore, Ellis fail to show or suggest, either expressly or inherently, at least “measuring a leakage current signal after the voltage pulse has been turned off, after ion transport has stopped, and after measuring the ion current signal,” as required by independent claim 1.

Yanaki, like Ellis, does not show or suggest at least the above limitation and fails to show or suggest that which Ellis lacks.

In fact, Yanaki teaches a *filter for removing noise* (see Yanaki, column 13, lines 60-66). It would be clear for a skilled artisan that a leakage current signal is not measured by a noise filter because the noise filter only removes a noise signal. Therefore, Yanaki necessarily cannot show or suggest “measuring a leakage current signal after the voltage pulse has been turned off, after ion transport has stopped, and after measuring the ion current signal,” as required by independent claim 1.

Further, Ericson, like Ellis and Yanaki, does not show or suggest at least the above limitation and fails to show or suggest that which Ellis and Yanaki lack.

In fact, Ericson teaches nothing beyond that because leakage currents at the input node add to or subtract from the input signal, the input devices were carefully selected to prevent the effect of the temperature (see Ericson, column 5, lines 49-53). That is, Ericson is completely silent with respect to a specific way and timing of measuring a leakage current signal. Therefore, Ericson is completely silent with respect to “measuring a leakage current signal after the voltage pulse has been turned off, after ion transport has stopped, and after measuring the ion current signal,” as required by independent claim 1.

In view of above, Ellis, Yanaki, and Ericson, whether taken separately or in combination, fail to show or suggest the invention as recited in independent claim 1. Thus, independent claim 1 is patentable over Ellis, Yanaki, and Ericson. Dependent claims are allowable for at least same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 1, 2, and 4-9 stand rejected under 35 U.S.C. 103 (a) as being unpatentable over Ellis in view of either Yanaki or Ericson as applied to claims 1, 2, and 4-9 and further in view of any of any of Frommer, Experiment 2-8, or Spanswick. Claims 5 and 9 stand rejected under 35 U.S.C. 103 (a) as being unpatentable over Ellis in view of either Yanaki or Ericson as applied to claims 1, 2, and 4-9, and further in view of U.S. Patent No. 6,889,152 (hereinafter "More"). Claims 5 and 9 also stand rejected under 35 U.S.C. 103 (a) as being unpatentable over Ellis in view of either Yanaki or Ericson and further in view of any of Frommer, Experiment 2-8, or Spanswick, as applied to claims 1, 2, and 4-9, and further in view of More. For the reasons set forth below, these rejections are respectfully traversed.

As discussed above, independent claim 1 is patentable over Ellis, Yanaki, and Ericson. Frommer, Experiment 2-8, Spanswick, and More, like Ellis, Yanaki, and Ericson, fail to show or suggest the claimed invention as recited in independent claim 1, and fail to supply that which Ellis, Yanaki, and Ericson lack.

Specifically, Frommer, Experiment 2-8, Spanswick, and More also fail to show or suggest at least the above limitation required by independent claim 1. This is evidenced by the fact that Frommer, Experiment 2-8, and Spanswick are relied on merely to provide the procedure of zeroing out a detector (*see, e.g.*, Office Action dated April 15, 2008, at page 7). This is also evidenced by the fact that More is relied on merely to provide the details such as adjusting gain

of amplifier and applying a ramping voltage (*see, e.g.*, Office Action dated April 15, 2008, at pages 8-10).

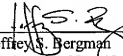
In view of the above, Ellis, Yanaki, Ericson, Frommer, Experiment 2-8, Spanswick, and More, whether considered separately or in combination, fail to show or suggest the present invention as claimed in independent claim 1. Thus, independent claim 1 is patentable over Ellis, Yanaki, Ericson, Frommer, Experiment 2-8, Spanswick, and More, for at least the reasons set forth above. Dependent claims are allowable for at least the same reasons. Accordingly, withdrawal of these rejections is respectfully requested.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591, Reference No. 07754/046001.

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